

What is claimed is:

1. A method of manufacturing a silicon wafer comprising
the step of flattening fine roughness existing on a side face of a
5 silicon block or a silicon stack used for manufacturing the
silicon wafer.

2. A method according to claim 1, wherein the step of
flattening comprises spraying a mixture of abrasive grains and a
10 medium on the side face of the silicon block or the silicon stack,
shifting closer or contacting a polishing member to or with the
side face to be polished, and moving the silicon block or the
silicon stack relatively to the polishing member in the presence
of the abrasive grains so that the side face of the silicon block or
15 the silicon stack is mechanically and physically polished.

3. A method according to claim 1, wherein the step of
flattening comprises spraying a medium on the side face of the
silicon block or the silicon stack, shifting closer or contacting a
20 polishing member having abrasive grains on its surface and/or
in the inside thereof to or with the side face to be polished, and
moving the silicon block or the silicon stack relatively to the
polishing member so that the side face of the silicon block or the
silicon stack is mechanically and physically polished.

25

4. A method according to claims 2 or 3, wherein the polishing is carried out while spraying the mixture of the abrasive grains and the medium or the medium solely.
- 5 5. A method according to any one of claims 1 to 4, wherein the flattened side face of the silicon block or the silicon stack has surface roughness R_y of 8 μm or less.
6. A method according to claim 5, wherein the flattened
10 side face of the silicon block or the silicon stack has surface roughness R_y of 6 μm or less.
7. A method according to any one of claims 1 to 6, wherein
15 a section of the silicon block or the silicon stack is constructed of four main lines, the lines forming an angle of about 90° with adjacent lines, respectively.